Amendments to the Claims

Please amend the claims as follows (the changes are shown with ~~strikethrough~~ for deleted matter and underlining for added matter). A complete listing of the claims is set out below with proper claim identifiers.

1. (Original) A 3-dimensional porous scaffold for tissue regeneration which comprises a structure composed of vertically long-shaped pores having a pore diameter of not less than 10 μm to not more than 500 μm and pore length of not less than 20 μm to not more than 1 cm being juxtaposedly arranged, and the spaces between the juxtaposed pores being communicated with small pores having a pore diameter of not more than 10 μm.

2. (Original) The 3-dimensional porous scaffold according to Claim 1, which has an approximately flat plate-shape with vertically long-shaped pores in the thickness direction being juxtaposedly arranged in the surface direction, and one side face being subjected to pore-opening treatment.

3. (Currently Amended) The 3-dimensional porous scaffold according to ~~Claim 1 or 2~~Claim 2, which is composed of a biocompatible material.

4. (Original) The 3-dimensional porous scaffold according to Claim 3, wherein the biocompatible material contains at least one selected from the group consisting of polylactic acid, polyglycolic acid, lactic acid/glycolic acid copolymer, poly ε caprolactone, and lactic acid/ε caprolactone copolymer.

5. (Original) A process for producing the 3-dimensional porous scaffold according to Claim 1 which comprises the following steps:

a) dissolving a scaffold material in an organic solvent,

b) pouring the prepared solution into a mold, and freezing the solution at a cooling rate of not slower than 3°c/minute, and

c) drying the frozen solution in vacuum to remove the organic solvent.

6. (Original) A process for producing the 3-dimensional porous scaffold according to Claim 2

which comprises the following steps:

a) dissolving a scaffold material in an organic solvent,

b) pouring the prepared solution into a mold forming an approximately flat plate-shape, and freezing the solution at a cooling rate of not slower than 3°c/minute,

c) drying the frozen solution in vacuum to remove the organic solvent, and

d) separating the dried scaffold in the central region of the thickness direction in the flat plate direction.

7. (Original) A process for producing the 3-dimensional porous scaffold according to Claim 2

which comprises the following steps:

a) dissolving a scaffold material in an organic solvent,

b) dispersing a granular salt in a mold forming an approximately flat plate-shape,

c) pouring the prepared solution into said mold, and freezing the solution at a cooling rate of not slower than 3°c/minute,

d) drying the frozen solution in vacuum to remove the organic solvent, and

e) removing the granular salt by washing with water.

8. (Original) The process for producing a 3-dimensional porous scaffold according to Claim 7,

wherein the granular salt is a mineral salt and/or organic salt.

9. (Currently Amended) A 3-dimensional cell combination

which is obtainable by culturing a cell or precursor cell derived from a tissue in the 3-dimensional porous scaffold according to ~~Claim 1 or 2~~Claim 1 in an artificial environment and/or the living body.

10. (Original) The 3-dimensional cell combination according to Claim 9, wherein the cell or precursor cell derived from a tissue is derived from a bone, cartilage, ligament, tendon, blood vessel, skin, fat, muscle, nerve, heart, liver, pancrea, intestine, kidney, cornea, bladder, ureter, urethra, breast, marrow, or cord blood.

11. (Original) The 3-dimensional cell combination according to Claim 10, wherein the cell or precursor cell derived from a tissue is derived from a bone, articular cartilage, ligament or tendon.

12. (Original) The 3-dimensional cell combination according to Claim 10, wherein the cell or precursor cell derived from a tissue is derived from the marrow, fat, liver, or cord blood.

13. (Original) The 3-dimensional cell combination according to Claim 10, wherein the cell or precursor cell derived from a tissue is a mesenchymal stem cell.

14. (Original) A 3-dimensional cell combination
which is obtainable by culturing a cell or precursor cell derived from a tissue in the 3-dimensional porous scaffold produced by the process according to Claim 7 in an artificial environment and/or the living body, and
has a compression modulus of not less than 1/10 of the normal cartilage.

15. (Original) A 3-dimensional cell combination
which is obtainable by culturing a cell or precursor cell derived from a tissue in the 3-dimensional porous scaffold produced by the process according to Claim 7 in an artificial environment and/or the living body, and
has a tissue structure more similar to the normal cartilage with the thickness from the side subjected to pore-opening treatment or side not subjected to pore-opening treatment being within the range of 1 to 90% of the whole thickness.

16. (Currently Amended) A process for producing a 3-dimensional cell combination

which comprises seeding a cell or precursor cell derived from a tissue in the 3-dimensional porous scaffold according to ~~Claim 1 or 2~~Claim 1, and culturing the cell in an artificial environment and/or the living body.

17. (Original) The process for producing a 3-dimensional cell combination according to Claim 16,

wherein the cell or precursor cell derived from a tissue is subjected to stand culture under 3-dimensional environment for 1 to 48 hours beforehand.

18. (Canceled)

19. (Currently Amended) The process for producing a 3-dimensional cell combination according to ~~any one of Claims 16 to 18~~Claim 18,

wherein the culture in an artificial environment is carried out under the condition of moving a culture fluid at a rate of 0.1 to 50 cm per second relative to the scaffold.

20. (Currently Amended) A medical treatment method of cartilage damage

which comprises transplanting the 3-dimensional porous scaffold according to ~~any one of Claims 1 to 4~~Claim 1, ~~or the 3-dimensional cell combination according to any one of Claims 9 to 15~~ into the living body.

21. (New) A medical treatment method of cartilage damage

which comprises transplanting the 3-dimensional cell combination according to Claim 9 into the living body.